$\lim\limits\_{x\to \infty}f(x) $;

 $ \lim\_{x\rightarrow \infty}g(x)$

 $\underset{y\to\infty}{{\lim\limits\_{x\to\infty}}}f(x, y)$

 First order derivative $f'(x)=(x^2+5x)'$, $(x^2+xy)'\_{x}$

 Second order derivative $f''(x)$

 K-th order derivative $f^{(k)}(x)$

 Partial firt order derivative $\frac{\partial f}{\partial x}$

 Partial Second order derivative $\frac{\partial^2 f}{\partial x^2}$, $\frac{\partial^2 f}{\partial x \partial y}$

 $\int\limits\_{0}^{1} (x^3+3x-5) dx$

 $\displaystyle\int\limits\_{0}^{1} (x^3+3x-5) dx$

 $\displaystyle\int\limits\_0^1\left(x^3 + 3x - 5\right) \mathrm{\,d}x$

 $\displaystyle\underset{D}{\int \int} (f)dtdx$

 $\displaystyle\int\limits\_0^1 \int\limits\_0^1 (f)dtdx$;

 $\int\limits\_0^1 \int\limits\_0^1 (f)dtdx$

$F(x,y)= \begin{cases}

 \begin{array}{lll}

 x +y &\mbox{ neu} & (x,y)\neq(0;0)\\

 1 & \mbox{ neu} & (x,y)=(0;0)

 \end{array}

 \end{cases}$

 $

 A=\begin{cases}

 x & \mbox{ neu } x>0\\

 1 & \mbox{ neu } x\le 0

 \end{cases}

 $

 $P(A \mid B)$

$ E[X] = \sum\_{x \in \mathcal{X}} x \cdot P(X = x)$

$P(X = k) = \binom{n}{k} p^k (1-p)^{n-k}$

 Sum $\sum\_{i=1}^{n}i=\frac{n(n+1)}{2}$

 Times $\prod\_{i=1}^{n}{i}={n!}$

 $A^\complement = \Omega \setminus A$

 $A \subset B$ or

 $A \subseteq B$

 $P(A)$ or

 $P(A|B)$

 $P(\displaystyle\frac{x}{2}>1 | x>0) = 0.5$

$

 p(\theta\, |\, D) = \frac{p(D\,|\,\theta) p(\theta)}{p(D)}

$